



RESEARCH NEWS

Electronic self reporting of symptoms may improve survival in patients with metastatic cancer

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Enabling patients with metastatic cancer to report any severe or worsening symptoms electronically using tablet computers significantly improved their overall survival more than usual care, a randomised trial has reported.¹

Symptoms are common in patients being treated for advanced cancers, but previous research has shown that these are not discussed with doctors on as many as half of the times they occur. Interest in integrating electronic patient reported outcomes into routine cancer care for symptom monitoring is growing, but evidence showing clinical benefit is limited.

Researchers randomly assigned 766 patients (median age 61) who were starting chemotherapy for metastatic solid tumours to usual care or to self reporting any of 12 symptoms common in patients being treated with chemotherapy for advanced cancer, using a web based questionnaire. The patients were all treated at Memorial Sloan Kettering Cancer Center in New York, USA, from 2007 to 2011.

When patients in the self reporting group reported a severe or worsening symptom an email alert was sent to a clinical nurse responsible for their care. And a report profiling the participants' symptom history was generated for their next visit to the treating oncologist.

The results, reported at the 2017 American Society of Clinical Oncology (ASCO) annual meeting and published in *JAMA*,¹ showed that the median overall survival was five months longer in patients who reported their symptoms electronically than in patients receiving usual care.

When overall survival was assessed after a median follow-up of seven years, 67% of the study participants had died (517 of 766). Median overall survival was 31.2 months (95% confidence interval 24.5 to 39.6 months) in the patients assigned to electronic self monitoring of symptoms and 26.0 months (22.1 to 30.9 months) in the usual care group (difference 5 months; $P=0.03$).

"Integrated patient reported outcomes into the routine care of patients with metastatic cancer was associated with increased survival compared with usual care," said Ethan Basch, lead author, from the Lineberger Comprehensive Cancer Center at the University of North Carolina, Chapel Hill.

He said that getting patients to report symptoms may have alerted clinicians and improved management of complications earlier, kept patients more physically functional, and improved management of chemotherapy side effects, enabling patients to continue treatment for longer.

Nurses responded to symptom alerts from patients 77% of the time with discrete clinical interventions, including calls to provide advice on managing symptoms, supportive medicines, modifications in chemotherapy dose, and referrals.

At an ASCO briefing Harold Burstein, of the Dana-Farber Cancer Institute in Boston, Massachusetts, commented, "It's remarkable that a relatively simple intervention can reduce emergency room visits, improve quality of life, and, incredibly, improve overall survival."

However, he was concerned that it would be a "big challenge" to implement this approach widely because healthcare systems did not have the resources to invest in patient reported outcome systems.



1 Basch E, Deal AM, Dueck AC, et al. Overall survival results of a trial assessing patient-reported outcomes for symptom monitoring during routine cancer treatment. *JAMA* 2017. doi:10.1001/jama.2017.7156.

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